DOCUMENT RESUME

ED 045 760 UD 011 076

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TITLE	Intelligence, Achievement, Self-Concepts, and Attitudes Among 1216 Typical Sixth- and Seventh-Grade Students in Fourteen North Carolina Public Schools: Preliminary Results of a Study Conducted January 1970.
INSTITUTION	North Carolina Advancement School, Winston-Salem.
PUB DATE	Nov 70
NOTE	25p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$1.35
DESCRIPTORS	*Academic Achievement, Achievement Tests, Boarding Schools, *Disadvantaged Youth, Educationally Disadvantaged, Experimental Schools, *Intelligence, Intelligence Tests, Junior High School Students, Low Achievers, Program Evaluation, Psychological Tests, Residential Schools, *Self Concept, *Student Attitudes, Student Motivation, Underachievers
IDENTIFIERS	North Carolina Advancement School, Winston Salem

ABSTRACT

The basic approach of the North Carolina Advancement School has been based on the belief that psychological and attitudinal factors of underachievement must be treated before students can achieve academically; the School's program, therefore, centers around improving the students' self concept, attitudes, and responsibility for learning. With boys from grades four through eight, this approach has been implemented with positive results. To obtain state-wide norms on attitudes, self concept, responsibility for learning, and intelligence and achievement, the School, with the cooperation of selected public schools, tested a total of 1,216 students. The data collected are in the process of being further analyzed; however, some preliminary comparisons on attitudes indicate that the Advancement School program has effected changes toward the norm. For related reports, see UD 011 077 - 081. (Author/JW)

ED0 45760

INTELLIGENCE, ACHIEVEMENT, SELF-CONCEPTS, AND ATTITUDES AMONG 1216 TYPICAL SIXTH- AND SEVENTH-GRADE STUDENTS IN FOURTEEN NORTH CAROLINA PUBLIC SCHOOLS

Preliminary Results of a Study Conducted January, 1970, by the North Carolina Advancement School

Ernestine Godfrey, Editor

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UD011076

THE NORTH CAROLINA ADVANCEMENT SCHOOL
WINSTON-SALEM, NORTH CAROLINA

November, 1970

INTRODUCTION

Since its reorganization in 1967 as a research arm of the state of North Carolina, the North Carolina Advancement School has established through its research that underachievement is related to psychological and attitudinal variables. The basic approach of the Advancement School in seeking solutions to the problem of underachievement has been based on the belief that these dimensions of the problem must be treated before the student can successfully achieve in an academic setting. The program of the school has thus centered around improving the underachiever's self-concepts, attitudes, and responsibility for learning. This philosophic approach has been implemented with underachieving boys from grades four through eight and has resulted in positive changes in all measured variables.

Although the changes among students after treatment at the Advancement School have been measured and analyzed, no data existed which would allow the school to assess these changes in relation to typical students. The Advancement School could not state, on the basis of research, that the underachievers treated at the school had attained desirable levels on tests for self-concepts, attitudes, and responsibility for learning. No norms were available for many of the instruments used by the school, a fact which prohibited comparison of underachievers with typical students of the same grade level.

To obtain state-wide norms on attitudes, self-concepts, and responsibility for learning, as well as intelligence and achievement, the Advancement School, with the cooperation of selected public schools, tested a total of 1216 students in North Carolina. Only students in grades six and seven were tested, since data were available on underachievers of these grades at the Advancement School. The testing program had as its objective providing data allowing for a definitive study of differences between the underachiever and the typical student. The testing program was carried out in January and February, 1970. This report is a summary of the preliminary findings of this project.

PROCEDURE

Selection of Subjects: A total of 1216 boys and girls in grades six and seven was tested. All students were enrolled in public schools in the state of North Carolina. Subjects were selected in the following manner:

School superintendents in selected areas of the state were contacted to ask their cooperation in the project. Permission was granted to test students in the following administrative units: Durham City, Durham County, Lexington City, Martin County, New Hanover County, and Winston-Salem/Forsyth County. Superintendents of these units were asked to contact principals of schools within their systems which they felt would be representative. Principals of the schools thus selected were asked to provide classes for testing which would be considered typical of their schools. Efforts were made to avoid testing classes which had been grouped by ability if the class was considered above or below average. In most cases, classes were heterogeneously grouped.

The schools in which testing was conducted were Brogden Junior High School, E. K. Powe School, George Watts School, G. L. Carrington, and Hillandale School, Durham; Dunbar Intermediate School, Lexington; E. J. Hayes and Williamston High School, Williamston; Chestnut Street and Forest Hills School, Wilmington; and Anderson Junior High, Jefferson Junior High, Kimberly Park Elementary and Moore Elementary, Winston-Salem.

Measurements: Tests were administered by staff members of the Advancement School, using standardized instructions. Students were informed that the tests would not in any way affect their grades.

The students were tested on the following variables:

Intelligence, as measured by the Otis Quick-Scoring Mental Ability Tests: Beta Test;

Mathematics achievement, as measured by the Wide Range Achievement Test- Math;

Reading achievement, as measured by the Gates Reading Survey - Form M2;

Self-concepts, as measured by the Tennessee Self Concept Scale;

Attitudes, as measured by semantic differentials;

Responsibility for learning, as measured by the Intellectual Achievement Responsibility (IAR) Scale.

Results on each of these measures were analyzed to determine mean scores by grade, sex, and race. In addition, mean scores were obtained for the total group on the basis of the population of the community in which the school was located, and by the number of grades repeated by the student.

RESULTS

Intelligence: The Otis Quick-Scoring Mental Ability Test was selected for use because it is brief (thirty-minutes) and can be easily scored. Results of this measure are presented in Table 1.*

The average I.Q. of all students tested (sixth- and seventh-graders) was 104.7. Sixth-graders scored 104 on intelligence, while seventh-graders scored 105.4. Female students scored slightly higher than males (106.2 to 103.1) and scores of white students were higher than those for Negro students (107.9 to 94.3). With each grade repeated, I.Q. scores were lower. Students from communities of more than 60,000 population scored slightly higher than those from smaller communities.

Achievement:

Math: The Wide Range Achievement Test (WRAT)- Math section was chosen to measure achievement in mathematics. This test is also brief -- 10 minutes. Table 2 summarizes the math achievement scores by percentile ranking as well as standard scores.

Results show that sixth-graders scored in the twenty-third percentile; seventh-graders in the twenty-fifth percentile. Boys and girls scored approximately the same. White students were at the thirtieth percentile, while Negro students scored at the twelfth percentile. Again students who had repeated grades had correspondingly lower scores, and those students from large urban communities scored slightly higher than those from smaller communities.

*Tables begin on page 13.

Reading: The Gates Reading Survey, Vocabulary and Comprehension sections, were used to test reading achievement. Results are presented in Table 3. Sixth-graders scored 5.8, approximately one-half year below grade level; seventh-graders had a grade equivalent score of 7.2, only slightly lower than grade level. Little difference existed between reading scores of boys and girls. Negro students scored approximately two grade levels below white students. Students from large urban communities again scored slightly higher than others. Those who had repeated one grade scored almost two years below those who had not repeated; those who had repeated two or more grades were three years below those not repeating.

Results of the reading and mathematics achievement testing indicate that a substantial discrepancy exists between achievement levels of white and Negro students. The results further indicate that students who repeat grades tend to remain far below grade level in skill areas.

Self-Concepts: The Tennessee Self Concept Scale, a measure of self-concept, is composed of twelve subscales, ten of which were used in analyzing data. These ten subscales were self-criticism; total positive; identity; self-satisfaction; behavior; physical self; moral-ethical self; personal self; family self; and social self. The subscales are further described below. Mean T-scores* obtained on the Tennessee Self Concept Scale are presented in Table 4.

*(Mean of 50, with a standard deviation of 10)

(1) Self-Criticism: This scale consists of mildly derogatory statements that most people admit as being true of themselves. Individuals who deny most of these statements are probably overly defensive and tend to deliberately present a favorable picture of themselves. Higher scores tend to indicate a normal openness and capacity for self-criticism.

It can be observed in Table 4 that all scores on this subscale were at or near the norm. (Scores ranged from 50-53.)

(2) Total Positive: This scale reflects the overall level of the individual's self-esteem. Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves and act accordingly. Persons with low scores tend to be doubtful of their own worth, often feel anxious, depressed, and unhappy, and have little confidence in themselves.

The highest score (45.8) on this subscale was obtained by female white students in grade six, while the lowest score (35.7) was that of students repeating two or more grades.

(3) Identity: This scale assesses how the individual sees himself. "This is what I am."

Scores ranged from a low of 33.6 (students repeating two or more grades) to a high of 47.4 (white female students in grade seven). Girls scored somewhat higher than boys (46.1 to 42.1).

(4) Self-Satisfaction: This scale assesses the way a person describes how he feels about the self he perceives. In general, the scores reflect the level of satisfaction or acceptance the individual has of himself.

Highest scores on this subscale were those of female Negro students in seventh-grade (47.4), and lowest were those of students repeating two or more grades (40.9).

(5) Behavior: This scale is a measure of the individual's perception of his own behavior.

Scores ranged from a high of 44.0 for white female sixth-graders to a low of 35.3 for students repeating two or more grades. Overall, girls scored slightly higher than boys (42.9 to 40.0).

(6) Physical Self: This scale assesses the individual's view of his body, his health, and his physical appearance.

On this subscale, scores were generally around 45. Seventh-grade female Negro students had the highest scores (47.0) while students repeating two or more grades were lowest (41.1).

(7) Moral-Ethical Self: This scale assesses the individual's perception of his moral worth and whether he is a "good" or "bad" person.

For the total group, this scale yielded lower scores than any other (40.5). Girls scored higher than boys (42.4 to 38.5) and white students scored higher than Negro students (41.2 to 38.4). The lowest scores were again those of students repeating two or more grades. This group fell nearly two standard deviations below the mean (30.7).

(8) Personal Self: This is an assessment of the individual's sense of personal worth and his general feelings of adequacy.

Scores ranged from a low of 41.2 (students repeating two or more grades) to 48.8 (white female sixth-graders).

(9) Family Self: This scale reflects the person's feelings of adequacy, worth, and value as a family member.

Little difference was noted on this subscale, except that students repeating two or more grades were again lowest - 36.9, compared to 45.4 for those not repeating grades.

(10) Social Self: Scores on this subscale reflect the person's sense of adequacy and worth in his social interaction with other people in general.

The highest scores on this measure were those of white seventh-grade girls (47.0), while the lowest were those of students repeating two or more grades (38.4).

Mean scores for all subjects resulted in the following rank order for the subscales:

Self-Criticism-51.9; Personal Self-47.3; Self-Satisfaction-46.4; Physical Self-46.2; Family Self-44.7; Identity-44.2; Social Self-43.9; Total Positive-43.6; Behavior-41.5; and Moral-Ethical Self-40.5.

The total group fell slightly below national norms on most subscales. The data indicate that students in sixth and seventh grades tend to have an unfavorable view of their behavior and moral worth. The data also indicate that repeating grades results in lower self-concepts. (The students repeating two or more grades scored consistently lower than other students.)

Attitudes: Semantic differentials composed of eleven scales were used to measure attitudes of students. Students were asked to rate themselves on these scales from five different perspectives--Me as I Am Now, Teachers, Home, School, and Me as I Would Like to Be. Each scale ranges from one to five, with one as the most negative rating and five as the most favorable. A total of 55 is the highest possible rating on each topic. Mean scores on each topic are shown in Table 5.

For the total group, scores ranged from a low rating of 41.9 on "Teachers" to a high rating of 50.6 on "Me as I Would Like to Be."

On "Me as I Am Now," the lowest rating was that of students who had repeated two or more grades, closely followed by sixth-grade male Negro students.

On attitudes toward teachers, the lowest rating was by seventh-grade male white students, followed by students who had repeated grades. Female students rated teachers higher than did male students, and Negro students rated teachers higher than did white students. It can also be observed that students from large urban communities rated teachers three to four points lower than did other students.

On ratings of home, no differences were apparent.

On attitudes toward school, ratings were fairly consistent; female students, however, rated school higher than did males. Students who had repeated grades tended to view school less favorably than did those not repeating.

On "Me as I Would Like to Be" (Ideal Self), a measure of student aspirations, the data indicate that white students have higher aspirations

than do Negro students. Students who had repeated grades also rated themselves lower on this topic.

Responsibility for learning: The Intellectual Achievement Responsibility (IAR) scale consists of thirty-four school-related items. The IAR is designed to measure the degree to which the student believes that his successes and failures in school are the result of his own efforts as opposed to being caused by external forces over which he has no control.

The scale yields three scores--positive, negative, and total. The positive score indicates the degree to which the student feels he is himself responsible for his successes. The negative score indicates the degree to which he feels he is responsible for his own failures. The total score is a combination of the positive and negative scores, and indicates the degree to which the student feels responsible for his achievement, regardless of whether the achievement is viewed as a success or failure. In each case, the higher the score, the more the responsibility the student feels for his learning.

The results on the IAR scale are given in Table 6. For the total group tested, the mean total score was 25.8. Sixth-graders scored higher than seventh-graders (26.0 compared to 25.6). Girls scored higher than boys (26.3 compared to 25.2), and white students scored higher than Negro students (26.1 to 24.7). The size of the student's community appeared to make no difference; however, grades repeated did. Students who had repeated no grades scored 26.0; one grade repeated, 25.9; and two or more grades repeated, 22.9.

SUMMARY

The data collected in this study are in the process of being further analyzed. The information gained from these analyses will allow meaningful comparisons between characteristics of underachievers and normal achieving students. Some preliminary comparisons have already been completed (see Figures 1, 2, and 3) and indicate that the Advancement School program has effected changes toward the norm. More detailed comparisons will be undertaken involving factor and cluster analyses in an effort to define specifically those differences which exist between students who achieve and those who do not.

TABLE 1

ANALYSIS OF SCORES ON OTIS QUICK-SCORING MENTAL ABILITY TEST

	N	$\bar{X}$	S.D.
Sixth Grade:	613	104.0	13.1
Males	297	102.6	13.3
Negro	58	92.2	10.1
White	239	105.1	12.8
Females	316	105.3	12.8
Negro	77	93.8	10.3
White	239	109.0	11.3
Seventh Grade:	577	105.4	13.2
Males	283	103.6	13.5
Negro	63	93.4	13.3
White	220	106.5	12.0
Females	294	107.2	12.7
Negro	77	97.0	11.8
White	217	110.8	10.9
Total Sixth & Seventh Grade:	1190	104.7	13.2
Males	580	103.1	13.4
Females	610	106.2	12.8
Negro	275	94.3	11.5
White	915	107.9	12.0
Grades Repeated:			
None	1021	107.2	11.7
One	127	91.3	11.4
Two or More	37	82.8	9.9
City Size:			
Over 60,000	397	107.5	13.1
10,000 - 60,000	479	103.5	12.8
Under 10,000	296	103.3	13.4

TABLE 2

ANALYSIS OF SCORES ON WIDE RANGE ACHIEVEMENT TEST - MATH

	N	$\bar{X}$ Standard Score	%ile	S.D.
Sixth Grade:	612	89	23	9.8
Males	296	88	21	9.8
Negro	57	80	09	8.6
White	239	90	25	9.0
Females	316	89	23	9.0
Negro	73	83	13	9.1
White	243	91	27	7.9
Seventh Grade:	583	90	25	11.1
Males	286	89	23	11.7
Negro	62	81	10	7.3
White	224	92	30	11.8
Females	297	92	27	10.3
Negro	76	84	14	8.8
White	221	94	34	9.5
Total Sixth & Seventh Grade:	1195	90	25	10.3
Males	582	89	23	10.8
Females	613	90	25	9.7
Negro	268	82	12	8.6
White	927	92	30	9.7
Grades Repeated:				
None	1024	91	27	9.3
One	129	81	10	10.6
Two or More	36	75	05	7.6
City Size:				
Over 60,000	390	91	27	10.7
10,000 - 60,000	496	89	23	8.9
Under 10,000	291	90	25	11.7

TABLE 3

ANALYSIS OF SCORES ON GATES READING SURVEY TEST - VOCABULARY AND COMPREHENSION

	N	Vocabulary $\bar{X}$ Grade Equivalent	Comprehension $\bar{X}$ Grade Equivalent
Sixth Grade:	621	6.0	5.8
Males	299	6.0	5.8
Negro	59	4.8	4.8
White	240	6.2	6.2
Females	322	6.2	5.8
Negro	77	5.2	4.8
White	245	6.6	6.5
Seventh Grade:	585	7.0	7.2
Males	287	6.8	6.9
Negro	62	5.6	5.2
White	225	7.2	7.3
Female	298	7.2	7.3
Negro	77	6.2	6.2
White	221	8.0	7.6
Total Sixth & Seventh:	1206	6.4	6.5
Males	586	6.4	6.5
Females	620	6.8	6.9
Negro	275	5.5	5.2
White	931	7.0	7.2
Grades Repeated:			
None	1033	6.8	6.9
One	130	5.2	5.0
Two or More	37	4.5	3.8
City Size:			
Over 60,000	395	7.0	6.9
10,000 - 60,000	497	6.4	6.5
Under 10,000	296	6.4	6.2

TABLE 4. ANALYSIS OF SCORES ON TENNESSEE SELF-CONCEPT SCALE

	All Subjects (N=1196)		Sixth Grade (N=617)		Seventh Grade (N=579)		Total Males (N=582)		Total Females (N=614)		Total Negro (N=277)		Total White (N= 935)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
SC	51.9	9.4	51.5	9.5	52.3	9.2	52.2	8.9	51.6	9.8	51.3	8.3	52.1	9.7
TP	43.6	10.6	43.6	10.9	43.7	10.4	42.5	10.3	44.8	10.8	42.4	8.9	44.0	11.1
ID	44.2	12.0	43.4	12.3	45.0	11.6	42.1	11.8	46.1	11.8	43.2	11.6	44.5	12.1
SS	46.4	11.2	46.6	11.1	46.2	11.2	46.4	10.7	46.4	11.6	45.1	9.7	46.8	11.5
BEH	41.5	11.2	41.5	11.7	41.4	10.7	40.0	11.2	42.9	11.1	41.2	10.3	41.5	11.5
PHS	46.2	11.2	45.8	11.5	46.6	10.8	46.0	11.5	46.4	10.8	46.5	10.7	46.1	11.3
MES	40.5	11.3	40.4	11.5	40.7	11.1	38.5	11.1	42.4	11.2	38.4	10.0	41.2	11.6
PS	47.3	11.8	47.7	12.1	46.8	11.4	46.9	11.8	47.7	11.7	47.5	10.3	47.2	12.2
FAS	44.7	10.8	44.9	11.0	44.5	10.5	43.8	10.6	45.7	10.9	44.2	9.6	44.9	11.1
SOS	43.9	10.5	43.1	10.5	44.7	10.5	42.6	10.0	45.1	10.9	42.0	9.3	44.5	10.8

Sub-scales: SC= Self-Criticism; TP= Total Positive; ID= Identity; SS= Self-Satisfaction; BEH= Behavior; PHS= Physical Self; MES= Moral-Ethical Self; PS= Personal Self; FAS= Family Self; and SOS= Social Self.

TABLE 4 (continued)

	No Grades Repeated (N=1028)		One Grade Repeated (N=126)		Two or More Gr. Repeated (N=36)		City Size Over 60,000 (N=395)		City Size 10-60,000 (N=495)		City Size Under 10,000 (N=288)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
SC	51.9	9.4	51.1	8.6	53.7	9.9	52.9	9.2	50.9	9.6	52.4	9.1
TP	44.3	10.7	40.9	8.7	35.7	10.2	44.1	10.4	43.7	11.6	43.0	9.4
ID	44.9	11.9	41.4	10.6	33.6	12.3	44.6	11.9	43.6	12.6	44.4	11.1
SS	47.0	11.3	43.7	9.3	40.9	10.2	46.8	11.3	46.8	11.7	45.3	10.2
BEH	41.9	11.3	40.2	10.0	35.3	11.9	41.8	11.1	41.3	11.9	41.3	10.4
PHS	46.5	11.1	45.2	10.7	41.1	12.4	46.4	11.2	45.9	11.7	46.4	10.5
MES	41.2	11.2	38.2	10.9	30.7	10.7	41.0	11.3	41.0	11.9	39.2	10.5
PS	47.7	11.8	45.7	10.8	41.2	11.7	47.5	11.4	47.0	12.6	47.4	11.0
FAS	45.4	10.7	42.1	9.5	36.9	13.0	44.6	10.7	44.8	11.8	45.1	9.0
SOS	44.4	10.6	41.3	9.0	38.4	9.9	44.8	10.2	43.9	11.1	42.7	10.1

TABLE 4 (continued)

	SIXTH GRADE								SEVENTH GRADE							
	Males				Females				Males				Females			
	Negro (N=58)		White (N=236)		Negro (N=79)		White (N=244)		Negro (N=64)		White (N=224)		Negro (N=76)		White (N=215)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
SC	50.3	7.5	52.2	9.6	52.1	7.8	51.0	10.2	52.6	8.3	52.6	8.6	50.0	9.0	52.7	10.1
TP	41.0	7.6	42.7	11.3	41.4	7.9	45.8	11.5	42.1	8.0	42.7	10.4	44.7	10.9	44.8	10.8
ID	40.2	11.7	41.3	12.5	42.3	10.3	46.5	12.2	44.9	11.2	42.7	11.2	45.1	12.6	47.4	11.4
SS	44.7	8.3	47.3	11.4	43.5	7.8	47.3	12.1	44.6	10.1	46.5	10.7	47.4	11.7	46.1	11.9
BEH	39.9	9.3	39.7	12.1	40.1	10.1	44.0	11.9	41.6	10.9	39.7	10.7	42.8	10.8	42.7	10.5
PHS	45.3	12.2	45.0	12.0	45.8	8.8	46.8	11.5	47.8	9.6	46.9	11.3	47.0	12.0	45.9	10.3
MES	37.0	8.9	38.9	11.9	37.4	9.9	43.5	11.5	36.5	9.6	39.1	11.1	42.0	10.5	43.2	11.2
PS	47.6	9.3	46.8	13.1	46.8	9.2	48.8	12.4	47.4	10.2	46.6	11.5	48.1	12.2	46.5	11.4
FAS	43.3	8.3	44.0	11.5	43.8	9.0	46.6	11.5	44.1	9.1	43.6	10.5	45.5	11.3	45.3	10.6
SOS	39.4	7.4	43.0	10.9	39.9	8.5	45.1	11.0	43.4	8.9	42.9	9.8	45.1	10.7	47.0	11.2

TABLE 5. ANALYSIS OF SCORES ON SEMANTIC DIFFERENTIALS

	N	Me Now		Teachers		Home		School		Ideal Me	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	X	S.D.
Total 6th and 7th Grade	1194	42.8	6.5	41.9	9.4	43.2	7.6	42.0	7.9	50.6	7.5
Total 6th Grade	615	42.9	6.8	42.7	10.1	43.3	7.9	42.4	8.1	50.1	8.2
Total 7th Grade	579	42.9	6.1	41.0	8.5	43.1	7.3	41.6	7.6	51.0	6.6
Total Males	584	42.5	6.4	40.2	10.0	43.3	7.5	40.7	8.5	50.6	7.3
Total Females	610	43.2	6.6	43.4	8.5	43.1	7.7	43.3	7.0	50.6	7.6
Total Negro	274	42.0	7.4	42.7	8.5	41.7	8.2	41.3	8.0	47.1	9.2
Total White	920	43.1	6.2	41.6	9.6	43.6	7.4	42.2	7.8	51.6	6.6
No Grades Repeated	1025	43.2	6.4	42.2	9.2	43.5	7.4	42.4	7.7	51.0	7.2
One Grade Repeated	127	41.1	7.0	39.7	10.4	41.7	8.5	39.5	8.5	48.6	8.3
Two or More Gr.Repeated	36	39.9	6.5	39.9	9.6	40.7	9.0	40.5	7.5	46.6	8.6
City Size over 60,000	397	42.0	6.8	39.7	10.0	42.7	7.8	41.5	7.9	50.6	7.5
City 10,000 - 60,000	493	43.6	6.5	43.2	8.9	43.7	7.7	42.3	8.3	50.7	7.4
City Under 10,000	286	42.8	6.1	42.6	8.8	42.9	7.1	42.3	7.0	50.3	7.5
Sixth Grade Male Negro	59	40.4	7.2	43.5	8.9	41.4	8.1	40.8	8.3	46.5	9.5
Sixth Grade Male White	236	42.8	6.6	40.0	11.3	44.0	7.3	40.9	8.8	51.3	7.1
Seventh Grade Male Negro	64	42.0	6.3	41.9	7.3	41.8	7.7	39.8	7.7	47.4	7.9
Seventh Grade Male White	225	42.8	5.7	39.2	9.2	43.6	7.3	40.6	8.5	51.8	5.9
Sixth Grade Female Negro	78	41.8	8.2	42.5	9.5	41.6	8.8	41.8	8.6	45.8	10.3
Sixth Grade Female White	242	43.8	6.3	45.1	8.5	43.7	8.0	44.4	6.7	51.3	7.4
Seventh Gr. Female Negro	73	43.4	7.4	43.0	8.2	42.1	8.2	42.4	7.3	48.5	8.6
Seventh Gr. Female White	217	43.0	6.0	41.9	7.9	43.2	6.8	42.8	6.4	52.1	5.4
Sixth Grade Male	295	42.3	6.8	40.7	11.0	43.5	7.5	40.9	8.7	50.3	7.9
Sixth Grade Female	320	43.3	6.8	44.5	8.8	43.2	8.2	43.7	7.3	50.0	8.5
Seventh Grade Male	289	42.6	5.9	39.8	8.9	43.2	7.5	40.4	8.4	50.8	6.6
Seventh Grade Female	290	43.1	6.4	42.2	8.0	42.9	7.1	42.7	6.6	51.2	6.5

TABLE 6. ANALYSIS OF SCORES ON THE IAR SCALE.

	N	Positive $\bar{X}$	Positive S.D.	Negative $\bar{X}$	Negative S.D.	Total $\bar{X}$	Total S.D.
Total Sixth & Seventh Grade	1189	13.6	3.2	12.4	2.8	25.8	4.2
Total Sixth Grade	610	13.7	3.0	12.4	3.0	26.0	4.2
Total Seventh Grade	579	13.6	3.4	12.3	2.5	25.6	4.2
Total Males	576	13.3	3.0	12.1	2.5	25.2	4.2
Total Females	613	14.0	3.4	12.7	3.0	26.3	4.1
Total Negro	275	13.2	3.3	11.7	2.4	24.7	3.9
Total White	914	13.8	3.2	12.6	2.9	26.1	4.2
No Grades Repeated	1021	13.7	3.0	12.5	2.8	26.0	4.2
One Grade Repeated	126	13.4	4.4	12.0	2.7	24.9	4.3
Two or More Grades Repeated	36	12.1	2.6	10.8	1.9	22.9	3.9
City Size over 60,000	387	13.9	3.7	12.5	2.5	26.1	4.2
City 10,000 - 60,000	493	13.5	2.4	12.5	2.5	25.9	4.1
City Under 10,000	291	13.6	3.7	12.1	3.5	25.2	4.4
Sixth Grade Male Negro	59	12.6	2.4	11.2	2.6	23.8	4.2
Sixth Grade Male White	231	13.5	2.5	12.3	2.5	25.7	4.1
Sixth Grade Female Negro	79	13.3	1.8	12.2	2.2	25.5	3.2
Sixth Grade Female White	241	14.3	3.8	13.0	3.6	26.8	4.3
Seventh Grade Male Negro	60	12.8	2.0	11.4	2.5	24.2	3.9
Seventh Grade Male White	226	13.4	3.7	12.2	2.5	25.4	4.3
Seventh Grade Female Negro	77	13.8	5.2	12.0	2.4	25.1	4.3
Seventh Grade Female White	216	13.8	2.3	12.8	2.6	26.5	4.1
Total Sixth Grade Male	290	13.3	2.5	12.1	2.5	25.3	4.2
Total Sixth Grade Female	320	14.1	3.4	12.8	3.3	26.5	4.1
Total Seventh Grade Male	288	13.3	3.4	12.1	2.5	25.1	4.3
Total Seventh Grade Female	293	13.8	3.3	12.6	2.5	26.2	4.2

Figure 1

PROFILES OF COMPARISONS OF NORMATIVE GROUP WITH ADVANCEMENT SCHOOL STUDENTS PRIOR TO TREATMENT AND AFTER TREATMENT ON MEASURES OF SELF-CONCEPT

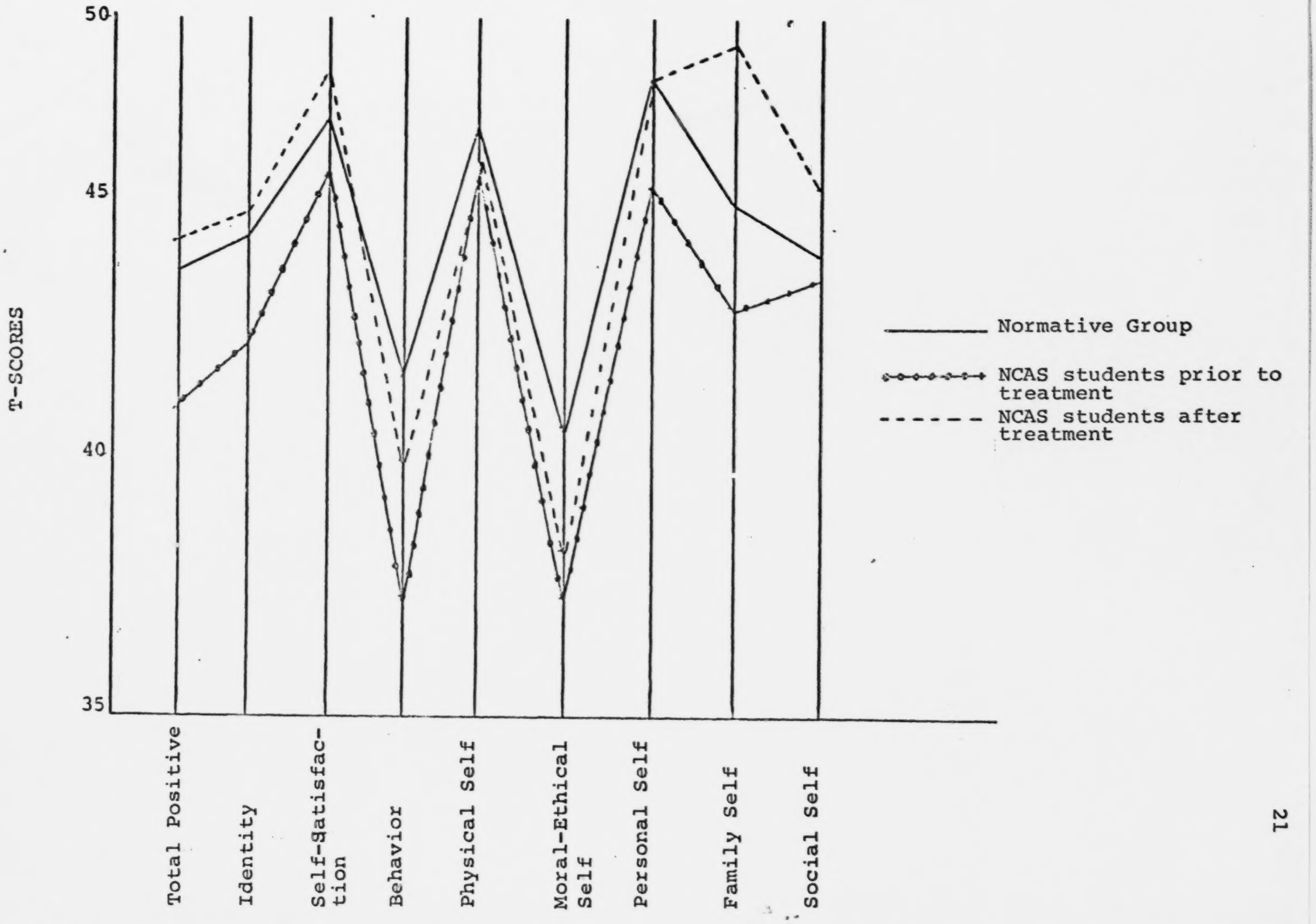


Figure 2

PROFILES OF COMPARISONS OF NORMATIVE GROUP WITH ADVANCEMENT SCHOOL STUDENTS PRIOR TO TREATMENT AND AFTER TREATMENT ON MEASURES OF ATTITUDES

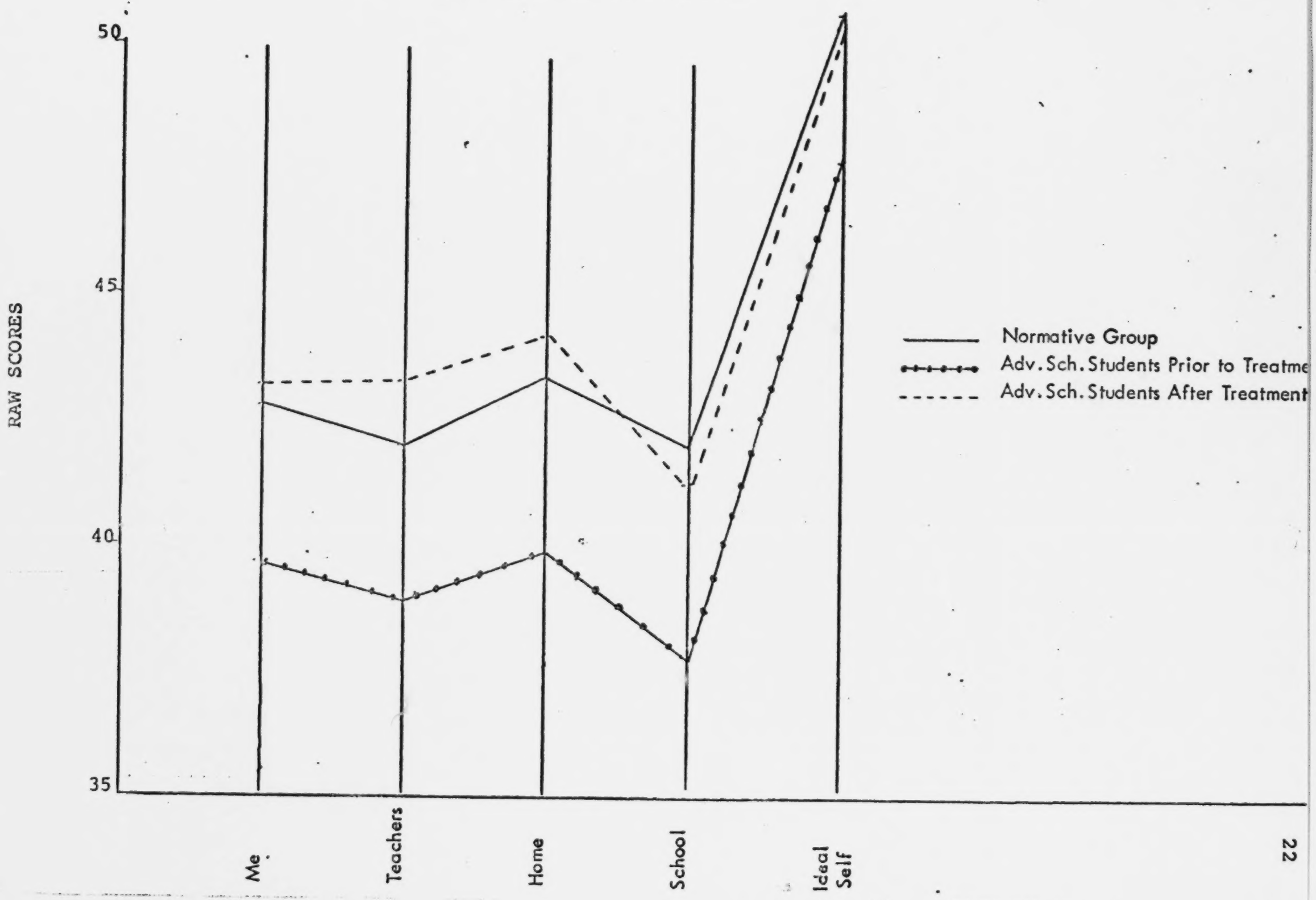
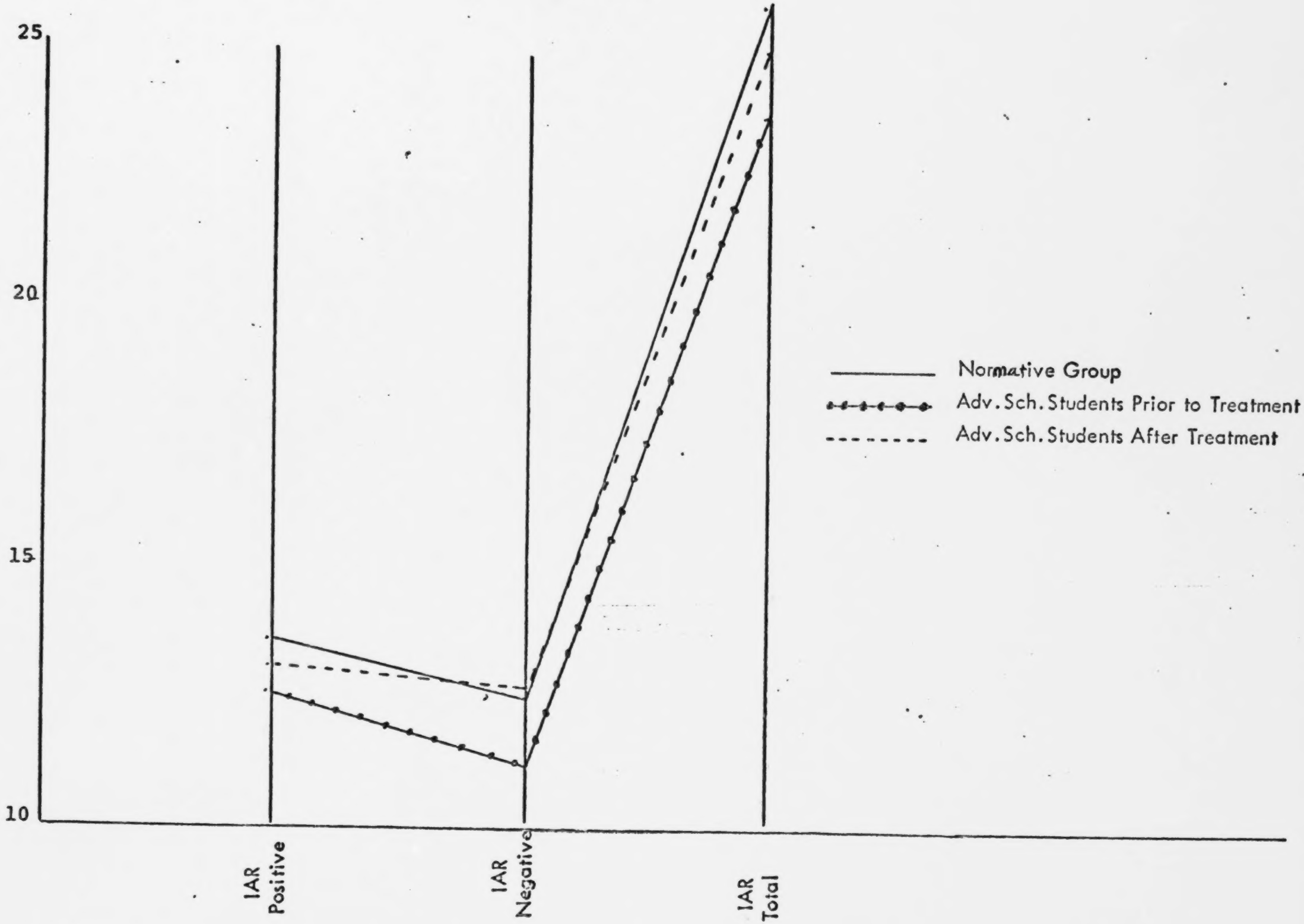


Figure 3

PROFILES OF COMPARISONS OF NORMATIVE GROUP WITH ADVANCEMENT SCHOOL STUDENTS PRIOR TO TREATMENT AND AFTER TREATMENT ON MEASURES OF ACCEPTING RESPONSIBILITY FOR BEHAVIOR



TESTS USED

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